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ABSTRACT

Projects financed by the Office of the Chancellor of the Swedish Universities are surveyed that are either completed or still in progress. They are categorized in three separate groups: (1) the structure of higher education and its relationship to society as a whole; (2) the organization of teaching and learning; and (3) evaluation: function studies and result control. In general, it is found that a change of direction has taken place in this research work in the last few years, with the result that more projects are now occupied with organizational problems than with teaching problems. Projects are described dealing with the role of higher education in working life, as well as in-depth studies of teaching-learning questions and the concept of knowledge in higher education. The projects are arranged by area in chronological starting order. (LBH)

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RESEARCH INTO HIGHER EDUCATION

a review of current Swedish projects

(preliminary version)

HE 006 821

June 1975
Research Project Group
Research and Development Unit
OFFICE OF THE CHANCELLOR OF
THE SWEDISH UNIVERSITIES

OFFICE OF THE CHANCELLOR
OF THE SWEDISH UNIVERSITIES
Research and Development Unit
Research Project Group

January, 1975

Research into Higher Education

A survey of projects financed by the Office of the Chancellor of the Swedish Universities and either completed or still in progress.

In order to facilitate planning and the best use of the results obtained the research projects have been divided into three problem areas as follows:

1. The structure of higher education and its relation to society as a whole
2. The organization of teaching and learning
3. Evaluation: function studies and result control.

All the issues for research into hihger education can in principle be assigned to one or other of these problem areas. In recent years research dealing with the higher education sector and financed by the Office of the Chancellor of the Swedish Universities has taken up about 15 % of the R and D budget for this sector. This research provides information to aid both long-range planning and short-term planning and development activities.

In general it can be said that a change of direction has taken place in this research work in the last few years, with the result that more projects are now occupied with organizational problems than with teaching problems. The role of higher education in the society has come to occupy a prominent place, as have also questions concerning the organization of the universities. In the projects dealing with the role of higher education in working life a study is, for example, being made of the connection between fluctuations in business activity and enrolments in the higher education sector, and of the role played by education in increasing productivity, in the distribution of individual incomes, in the way individuals select their employment and also in the way firms select their employees. Some of the projects are investigating the labour market situation of groups possessing a specialized education, such as engineers, sociologists, social workers and political scientists.

Some projects throw light on organizational questions within higher education at the department level, while others deal with problems of scale and location of higher education, for example, in the form of analyses of the supply of and the demand for higher education. One or two projects are engaged on studies of objectives and content from the point of view of society at large. This is in some cases a part aspect only of analyses of the training for special professions; one project is analysing goals in adult education, while another has examined the way in which the cross-disciplinary goals of university education are treated by the mass media.

The training of research workers in certain subjects is analysed in a historical perspective, and organizational questions in this field are dealt with as sub-problems in a number of projects.

At the same time as the research programme dealing with higher education has been widened from purely behavioural research to social science research, an attempt has been made to study central teaching-learning questions in more depth. An example of this is that a number of projects are now specially concerned with the concept of knowledge in higher education. One of the research projects into higher education now in progress within the Education Department of Gothenburg University is paying special attention to the subjective aspect of knowledge and to the extent to which students understand the central concepts within certain subject areas. Other projects have tried or are trying to define fields of knowledge and the knowledge embraced by various subjects, for example, sociology, history and mathematics. The research programme has also been directed more towards the social context and organizational enviroment within which higher education is provided. Here there are projects which throw light on the social interplay between teacher and student, as well as on the way in which the study and teaching process is dependent on organizational limits and restrictions. Research projects aimed at questions of evaluation have also taken up issues concerning the external results of the education received and its functions in society. At the same time projects are in progress which shed light on internal evaluation aspects, such as for example the importance of prior knowledge and those factors in the organization of higher education which affect the progress made by the student and his/her feeling of satisfaction.

The survey which follows provides a description of the present situation both as regards research projects completed and those still in progress. In this list the projects have been arranged by area in chronological starting order. Further information about research projects finanzed by the Office of the Chancellor of the Swedish Universities, such as for example the costs incurred on each project, which disciplines and departments that participate etc, is to be found in the information bulletin Educational Development.

LIST OF CONTENTS

Project, Project Leader	Started Completed	Page
Problem Area 1. The Structure of Higher Education and its Relation to Society as a Whole		
The Connection between Basic Education, Working Experience, and Further Education within Certain Careers in Working Life (Docent Åke Jerkdal)	70-73	7
Goal Analysis Studies of Cross-Disciplinary Goals (Professor Åke Bjerstedt)	70-75	9
Education and the Labour Market (Professor Harald Dickson, Docent B-Ch Ysander)	71-76	10
The Adaptation of University Organization to an Integrated System of Education (Professor Dick Ramström)	71-75	12
The Education Content of a University Subject (Professor Ulf Himmelstrand)	71-75	13
Goal Analysis of Post-Secondary and Other Adult Education (Lena Johansson, FD)	72-75	15
Aspects of Education and the Division of Labour (Bengt Gesser, FL)	73-75	16
Research and the Training of Research Workers: Conditions and Administration (Professor Torsten Husén)	73-75	17
Extra-Mural University Education (Docent Nils Häggström)	73-74	18
The Business Establishment and Higher Education - an Analysis of the Expectations of Prospective Employers(Per Sjöstrand, FL)	74-76	20
The Expansion of the Educational Sector in Sweden in the 20th Century (Professor Lennart Jörberg)	74-77	21
Technical Work and the Education of Engineers - Data and Theories Relating to Social Change (Boel Berner, FK)	74-75	22

Project, Project Leader	Started Completed	Page
Alternative Educational Structures in the Northern Educational Region (Docent Nils Häggström)	74-77	23
Educational Administration in Northern Sweden (Docent Jan-Erik Lane)	74-78	24
Social Welfare Policy and Social Work - an Integrated Analysis of Scientific and Political Models for Social Welfare Policy and Education for Social Work (Lektor Per Holmberg and Lektor Carsten von Otter)	75-75	25
Problem Area 2. The Organization of Teaching and Learning		
Learning and Study Skills (Docent Ferenc Marton)	70-75	27
University Studies in Teams (Anders Fransson, FL)	71-75	30
Client-Related Supervision (Professor Ingvar Johannesson)	71-75	32
The Treatment of Students With Difficulties in Adjusting to a University Enviroment (Professor Ingmar Dureman)	71-75	33
Studies Concerning the Value of Various Teaching Methods in Higher Education (Daniel Kallós, FL)	72-75	35
The Pedagogics of Problem Solving with Emphasis on Statistical Problems (Professor Lennart Sjöberg)	73-76	37
Psychological Studies of Basic Economic Concepts (Docent Ference Marton)	74-77	39
The Role of Mathematics in Higher Technical Education (Matts Håstad, FL)	74-77	40
An Analysis of the Teacher Role in Certain Academic Teaching Situations (Airi Rovio-Johansson)	74-77	41

Project, Project Leader	Started Completed	Page
Problem Area 3. Evaluation: Function Studies and Result Control		
Analysis of Education and Students (Umeå) (Inga Elgqvist-Saltzman)	68–73	43
The Post-Secondary Process of Study and Vocational Choice (Professor David Magnusson)	70–79	45
Studies of Internal and External Communication Concerning Higher Education (Professor Åke W Edfelt)	70–75	47
The University Enviroment, Effidiency in Studies and Political Activity (Professor Georg Karlsson)	70–75	49
Analysis of Education and Students (Gothenburg) (Professor Urban Dahllöf)	72–74	51
A Survey of Vocationally-Oriented Courses (Lektor Lars G Bäckström)	72–75	53
Post-Secondary Education and Background (Professor Torsten Husén)	72–75	54
Evaluation of University Teaching at the Department Level (Professor Sten Henrysson)	72–75	55
A Study of Administrative Functions at University Departments (Anders Herbert, FL)	73–75	57
Ways in, out and through an Educational System (Inga Elgqvist-Saltzman)	73–75	58
The Results of Post-Graduate Education (Professor Birgitta Odén)	74–78	59
Production and Productivity at Swedish Universities (Professor Ingmar Ståhl)	74–75	60
The Career Paths and Spheres of Work of the Political Scientist (Professor Olof Ruin)	74–75	61

Research Projects on

The Structure of Higher Education

and Its Relation to Society

as a Whole

TITLE OF PROJECT: BASIC EDUCATION - WORKING EXPERIENCE - FURTHER EDUCATION WITHIN CERTAIN CAREERS IN WORKING LIFE

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PA-Rådet
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PROJECT STARTED: 1970

PROJECT COMPLETED: 1973

Presentation of the Problem: The principal aim of the project was to survey the interplay between basic education and working experience as well as the way the careers of certain people in positions of seniority had developed, and in so doing try to find methods of describing posts and of determining requirements as regards further education.

The investigations concentrated on three aspects, namely 1) the shaping of a person's career - changes in certain variables as the career developed, 2) the role of education in working careers and 3) the role of experience in working careers.

Methods: structured interviews were held with more than 200 poeple in senior posts, and the interviewees were asked to describe their working careers with emphasis on the importance of education and working experience.

Principal result: The 207 persons who were interviewed had held a total of 956 posts. A common result for the project was the development of a model for classfying relatively hetergeneous posts as regards degree of seniority, function and the stage reached in the career. The study of the shaping of a person's career indicated that changes of post across functional boundaries are tending to increase, while transfers between firms and branches of industry are tending to decrease in number. The possibility of influencing the content of one's work seems to be connected with the level of seniority at the same time as the choice of working methods at various levels is relatively free. Job content and future prospects are two important considerations when changing one's job. Education plays an important role when it comes to choosing one's first job, but becomes less important further up the promotional ladder. In general the relative importance of education in measuring up to requirements tend to decline as people take part in courses and become aware of the gaps in their knowledge. At the samt time the cumulative working experience gained makes an important and growing contribution to the way people do their job satisfactorily. The utilization link between posts in general areas of experience gradually increases along with the number of upward steps in the career. Experience also combines with organizational variables such as, for example, the level reached in the chain of command. In the early stages working experience can often lead to a change in level, whereas the change at the upper levels of the hierarchy is most often a lateral one.

A more detailed presentation of the project is to be found in Educational Development No. 5, 1973, which may bo ordered from the Research and Development Unit, Office of the Chancellor of the Swedish Universities, Box 16334, 103 26 Stockholm 16.

Biographical detailes: Up to now eight reports (in Swedish) have been published within the project and a condensed report may be expected.

Jerkedal, Å	Connection: Basic Education - Working Experience - Further Education within Certain Careers in Working Life. Background and Aims. 1973
Kerstell T	The Shaping of the Career - the Changes in Certain Variables in Career Development. Introduction to an Empirical Study. 1973
Lindberg L G	The Role of Education in the Working Career. Introduction to an Empirical Study. 1973
Flach B	The Role of Experience in the Working Career. Introduction to an Empirical Study. 1973
Flach B Kerstell T Lindberg L G	The Planning and Implementation of the Empirical Study and some General Results. 1973
Kerstell T	The Structure of the Career - the Change of Certain Variables in the Career Development. Results from an Explorative Study. 1973
Lindberg L G	The Role of Education in Working Careers. Results from an Explorative Study. 1973
Flach B	The Role of Experience in Working Careers. Results from an Explorative Study. 1973

TITLE OF PROJECT: GOAL ANALYSIS STUDIES OF CROSS DISCIPLINARY GOALS

Professor Åke Bjerstedt (Scientific Leader)
Dr Pekka Idman (Project Leader)
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PROJECT STARTED: 1970

PROJECT COMPLETED: 1973 (1975)

The debate about the goals of university education is sometimes at a standstill for long periods of time only to come to life in connection with proposed reforms such as UKAS and U68. Data have been collected and analysed within the project in order to facilitate a continous discussion of goals.

Three areas of goals have been distinguished: Specific professional education goals, specific subject goals and goals not involving specific subjects. The project deals primarily with the third of these areas. How important is it felt to be? What does it contain? How realistic are these goals, and how are they to be arranged in order of priority? How does the present organization of university education facilitate or inhibit the realization of these goals?

The work took the form of three subsidiary investigations:

1) Debate analysis as a means of seeking out goals
2) Opinions expressed by teachers and students at Lund University about goals
3) Opinions expressed by teachers and students at other universities and higher education establishments about goals

Method: The first study consists of an analysis of the debate about goals in leading articles and cultural articles in selected Swedish daily newspapers and in student magazines. The second study consists of an investigations by means of interviews and the third of a questionnaire study.

Reports of the questionnaire and investigation studies together with, possibly, a short summary of the work done "on seeking out goals" are expected to be published by the summer of 1975.

Bibliographical details: (No 2 and 3 in Swedish)

Idman P — Equality and Democracy. Studies of Teacher Training. Studia Psychologica et Paedagogica. CWK Gleerup, Lund. 1974

Idman P — Debate Analysis as a Means of Seeking out Goals. Department of Education and Psychology, School of Education, Malmö, No 235, April 1974

Idman P — Extracts from the Debate about the Goals of Higher Education: a collection of summaries of articles. Department of Education and Psychology, School of Education, Malmö, No 25, April 1974

Idman P — Equality and Democracy as Educational Goals. Reprint from Department of Education and Psychology, School of Education, Malmö, No 160, 1974

TITLE OF PROJECT: EDUCATION AND THE LABOUR MARKET

Professor Harald Dickson
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Docent Bengt-Christer Ysander
Economics Department
Stockholm University
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Tel 08 - 15 01 60/1045

PROJECT STARTED: 1971 (a) 1974 (b)

PROJECT COMPLETED: 1975 (a) 1976 (b)

Presentation of problem: The project is aimed at a theoretical elucidation and an empirical description of certain central aspects of the relationship between the educational system and the labour market. The project is divided into two subsidiary studies:

a) "The Expanding Market for Highly Qualified Personnel". Based on the microeconomic model - an integrated model of decision theory and behaviour concerning individual educational choice and a model based on information theory concerning the firm - long-term demand and supply functions are derived and adaptation mechanisms are examined.

Reporting plan: The report is intended to consist of 9 chapters, of which chapters 1-5 are in preliminary versions by August 1975, while chapters 6-9 should be available by February 1976.

b) "Allocation and Distribution Effects of Education".
The study is analysing from some theoretical models (a straight forward human capital approach, a straight forward sorting model and a mixed model) the range of educational policies concerning distribution and allocation.

Reporting plan:

1. The effects of education on the labour market. Various problems, illustrated by Swedish data
   Empirical links between education - growth distribution and allocation
2. Alternative approaches to an explanation of the connection between education and the labour market. A critical evaluation
   a) various uses of explanatory models
   b) educational investments in human capital - a survey
   c) a critical discussion of the concept of human capital
   d) alternative models
   e) summing up
3. Economic theory and educational policy - consequences for policy of alternative theoretical approaches.

Methods: Studies of the literature, construction of models, statistical processing of existing data (Population and Housing Census -70, labour force studies, register of graduates, etc) in order to investigate the extent to which data are compatible with the various theoretical hypotheses.

Bibliographical details (in Swedish):

Bornemalm-Jardelöw G Higher Education and Income Formation - the Profitability of Education. Stencil 1971

Sohlman Å Theories of the Impact of Education on Wages and Wage Distribution. Stencil 1973

Sohlman Å Theories of the Labour Market. Stencil 1974

TITLE OF PROJECT: THE ADAPTATION OF UNIVERSITY TO INTEGRATED EDUCATIONAL SYSTEM

Professor Dick Ramström (Scientific Leader)
Runo Axelsson FM (Project Leader)
Lennart Rosenberg, Economist (Project Leader)
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PROJECT STARTED: 1971

PROJECT COMPLETED: 1975

Presentation of the problem: How should the organization of Departments and courses be changed in order to correspond to the damands for cross-disiplinary integration and vocational orientation proposed by the U68 Commission of Enquiry? Comparisons are to be made between the traditional methods of solving the problem of integration and alternative solutions that are better adapted to the situation that exists.

Methods: Studies of the literature, action-oriented research, empirical cross-sectional studies of organizational pre-requisites and solutions.

The work is now being directed towards a comparative cross-sectional study of existing organizational solutions. Eleven types of education are included in the investigation, among them, technical education, the education of journalists and social workers, as well as the education of doctors and economists.

Bibliographical details:

Axelsson R
Rosenberg L — University Organization in Transition - Some Normative Considerations. Umeå, 1974

Axelsson R
Rosenberg L — Towards a New University Organization. Higher Education. 1974

Axelsson R
Orring E
Rosenberg L — Decision-Making in a University Organization - A Case Study. Umeå, 1974

Axelsson R
Rosenberg L — Organizational Development in a University Organization. Umeå, 1974

Ramström D — The University as an Adaptive Organization. Umeå 1973

It is proposed to issue the final report in the autumn of 1975.

TITLE OF PROJECT: THE EDUCATIONAL CONTENT OF A UNIVERSITY SUBJECT

Professor Ulf Himmelstrand (Scientific Leader)
Gunnar Gelin, FK (Project Leader)
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PROJECT STARTED: 1971

PROJECT COMPLETED: 1975

For some years now professional sociologists, ad hoc groups from within the Swedish Association of Sociologists, sociologists and employers outside the universities, as well as planners of teaching, have been discussing the goals of sociology teaching and the labour market situation of sociologists. The strong quantitative growth of sociology as a subject together with the shortage of competent teachers have been important determinants in this respect.

In contrast to the opinions expressed on the labour market concerning a number of closely-related professions, for example, psychologists, social workers, economists, statisticians - opinions about what a sociologist "can do" are rather diffuse.

Presentations of the problem:

- Which of the models available for educational planning is the least inadequate?
- What educational content (that is to say, the repertoire of behaviour, the knowledge and aims a person should be equipped with after having had a certain education) ought to be demanded of the teaching process that leads to a 60-point qualification in sociology?
- What spectrum of attitudes exists at present on the labour market concerning the educational content of sociology?
- What does the actual distribution look like at the present time: what repertoires of behavoiur, knowledge and aims are possessed by those who have graduated with 3 marks/60 points in sociology during the last five years?
- What is the labour market situation for those graduates who have 3 marks/60 points in sociology, what jobs are they doing, what salaries are they paid and what are their future prospects?
- The same presentations of the problem at different points of time in the future.

Bibliographical details (in Swedish):

Subsidiary study 1 THE INTERNAL DEVELOPMENT HISTORY OF EDUCATIONAL CONTENT

Gelin G
Lundqvist K

The Educational Content of Sociology: Vaiations During the Years 1967-1972. Points of view concerning method. Determination of categories of the dimension of form. Determination of categories of the dimension of content. Summer 1973

Rebeling B — The Educational Content of Sociology: Variations During the Years 1967-72. An Analysis of Examination Questions: Trends in "Elementary Sociology" and "Sociological Theory". Appendix: Interviews with Study Advisors Concerning Forms of Examination. Summer 1973

Gelin G — The Educational Content of Sociology: Variations During the Years 1967-72. Analysis of Examination Questions: Trends as Regards Methods. December 1974

Lundqvist K — Compilation and Analysis of Curricula and Readings Lists for Sociology during the Academic Years 1967/68 - 1971/72. Some Attempts to Determine Trends. Summer 1975

Gelin G — The Internal Development of Sociology in Sweden on the Basis of Replies to Questionnaires by Sociology Graduates and Replies Given during Interviews with Experts. January 1975

Subsidiary study 2 RECENT INTERNAL INFLUENCES

Gelin G — Recent Influences and Theoretical Trends in Sociology in Sweden. Some Attempts at Interpretation on the Basis of Interviews with Experts and Factor Analysis of Replies to Questionnaires Given by Graduates. January 1975

Subsidiary study 3 ANTICIPATED FUTURE INTERNAL TRENDS

Gelin G — Compilation of Future Trends in Sociology as a Subject According to Research Discussions, Questionnaire Replies from Graduates and Replies Given during Interviews with Experts. (In course of proparation)

Subsidiary study 5 RECENT ENVIRONMENTAL DEMANDS

Gelin G — Demands on and Evaluation of the Educational Content of Sociology According to Replies from Graduates in Sociology and Replies Given during Interviews with Experts. (In course of preparation)

Theoretical background material

Gelin G — Demands on a Planning Model Intended to Develop the Educational Content of a University Subject. Preliminary version March 1972, final version September 1974

Gelin G — Innovation and Reaction within Social Science Education. Concerning certain alternative approaches to curriculum development. Preliminary version autumn 1973, final version December 1974

Himmelstrand U — The Educational Content of Sociology Condensed final report. January 1975

Further reports may be issued, among them one relating to a compilation of discussions in the literature and in journals about the development of sociology in Sweden and North America and its relation to developments in society, and another to future environmental requirements in the educational field.

All reports are published by Uppsala University, Sociology Department.

TITLE OF PROJECT: GOAL ANALYSIS OF POST-SECONDARY AND OTHER ADULT EDUCATION

Docent Bengt Abrahamsson (Scientific Leader)
Lena Johansson, Reserach Assistant (Project Leader)
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PROJECT STARTED: 1972

PROJECT COMPLETED: 1975

Presentation of the problem: The project aims to increase understanding of the basic assumptions concerning social context and the functions of education that lie behind the growing interest in adult education. The project includes the following points: Surveying and analysing the reasons given for spending more on adult education. Summarizing and analysing the assumptions concerning the relations between education and society as a whole made within different theoretical schools. Compiling the results of research into the motives that lead adults to study, combined with exploratory interviews.

These three points are then linked together so that the assumptions concerning the relations between education and society that were made when formulation the official goals of adult education are analysed, the motives leading individuals to study or their lack of interest in education are related to the official goals of adult education, while light is shed on the assumptions made by adult students about the effects of education on the individual and on society as a whole.

Methods: Studies of the literature, exploratory interviews.

Reporting plan: The reporting of the project is to be concluded in 1975.

A more detailed presentation of the project is to be found in Educational Development No 2, 1974, which may be ordered from the Research and Development Unit, Office of the Chancellor of the Swedish Universities, Box 16334, 103 26 Stockholm 16.

Bibliographical details (in Swedish):

Johansson L — Why Adult Education? Preliminary part report. Sociology Department, Stockholm University, 1974. Stencil.

TITLE OF PROJECT: ASPECTS OF EDUCATION AND THE DIVISION OF LABOUR

Bengt Gesser, Research Associate
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PROJECT STARTED: 1973

PROJECT COMPLETED: 1975

The principal aim of this survey is exploratory, the intention being to elucidate various aspects of the relationship between education and the labour market. In the course of work on these problems four different aspects have proved of interest. The first three of these will be studied above all with the help of literature on the subject (including the reports of Parliamentary Commissions of Enquiry and the like). The fourth comprises three subsidiary empirical studies. A report (in Swedish) entitled "Upper Secondary Education and Social Stratification" (B Gesser - E Fasth, July 1973) has been published by the Office of the Chancellor of the Swedish Universities and may be regarded as a stage in the work under points 1 to 3. The following aspects are considered:

1. An analysis of the concept of division of labour with a view finding dimensions of this concept that can be related to the educational system, e.g., so that educational content is kept up to date.

2. Efforts to find points of contact between "current" theories of patterns of educational and vocational choice (including public counselling on these problems) and ideas concerning distributive equality - above all equality of opportunity.

3. The question of the possible role of education in enhancing above all distributive equality in Swedish society is also closely related to point 2.

4. Changes in educational distribution and "equality of opportunity".

A subsidiary study is being made by Eva Fasth. She compares Lund University with its offshoot Växjö as regards differences in enrolment and the educational result (due to such factors as a less differentiated offer of courses and the lack of contact with research at Växjö). A preliminary report will be presented around the 1st of September, 1975.

TITLE OF PROJECT: RESEARCH AND TRAINING OF RESEARCH WORKERS: CONDITO CONDITIONS AND ADMINISTRATION

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International Education Department
Stockholm University
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Tel 08 - 15 01 60

PROJECT STARTED: 1973

PROJECT COMPLETED: 1975

Aims:

1. Existing international and Swedish investigatory and research material concerning the conditions under which university research work is conducted is to be perused and subjected to critical evaluation and compilation. (Examples of material that ought to be included are the Reports of the Carnegie Commission and the Newman Report from the USA, the Report of the Robbins' Commission from England, the OECD "Country Review" from France and the U68 Report from Sweden).

2. On the basis of existing material an attempt is to be made to outline future lines of development concerning basic educational issues, priority being given to the administrative conditions that are decisive for the scientific productivity of the universities and their capacity for innovation.

3. The results yielded by the studies could be incorporated in the background material used in the long-range planning work in the university sector.

4. This project is published in April 1975 in a book: Torsten Husén, Universiteten och forskningen (Universities and Research), Stockholm, Natur och Kultur, 112 pages.

TITLE OF PROJECT: EXTRA-MURAL UNIVERSTIY EDUCATION

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PROJECT STARTED: 1973

PROJECT COMPLETED: 1974

Presentation of the problem: The study can be devived into two parts:

1. A follow up of the study "Regional enrolment at universities and higher education establishments during the 1960s", Swedish Government Official Reports 1972:23. The issues taken up include: Have the spatial preferences of students changed as a result of the pronounced falling off in the tendency to choose higher education? How has the composition of the student body changed? During the first years the affiliated universities were in existence a certain increase in new enrolments was evident. Has this increase been maintained? etc.

2. Evaluation of extra mural university education on the basis of these issues: What effect does the availability of education at these affiliated universities have on the existing universities, higher education establishments and extra mural departments? Do the various forms of extra mural university education compete with universities and higher education establishments about the students, or are these additional educational possibilities to be regarded as a complement to the course of study traditionally provided at universities and higher education establishments?

Methods: The first part of the study is based on an analysis of enrolment forms stored centrally by the Central Bureau of Statistics. The material is presented in chart form, with tables and diagrams.

The second part "Extra Mural University Education" is based on a questionnaire sent out to all the study courses arranged by adult education organizations in Northern Sweden during the spring term 1973, as well as to all those taking decentralized study courses in the Northern Educational Region in the spring term 1973.

Main results: The falling off in enrolments at universities and higher education establishments has led to an ever increasing proportion of students from areas in close proximity to the develpoment centres. This is linked with an increase in enrolments of students to whom distance is an important factor; in other words, students who are older, and are married.

Relatively big changes took place in the early 1970s in the catchment areas of the universities - that is, the areas they dominate. The main cause of these is that the falling off in enrolments for the liberal arts faculties affected most severely the university offering such courses of study. A university with a broad array of faculties and subjects to which entry was restricted experienced a relative strengthening of its position (Stockholm is an example). As far as the extra mural "off shoots" are concerned the additional enrolments, which as was noted in Swedish Government Official Reports 1972:23 were maintained in the early 1970s, have even tended to increase.

The extra mural university education provided by the adult education organizations and in the form of decentralized courses under the auspices of local education authorities tends to be of a complementary or extension course kind. So these activities do not compete with the traditional universities and higher education establishments. The systematized decentralized education provided i Luleå, Östersund and Sundsvall, on the other hand, does compete in some respect with the educational service provided by above all Umeå University.

The study has resulted in a Report (in Swedish): Bertil Hammarberg, Nils Häggström, "The Scale and Location of Higher Education - A Study of the Situation in the Academic Year 1972/73". Umeå 1974

TITLE OF PROJECT: THE BUSINESS ESTABLISHMENT AND HIGHER EDUCATION: AN ANALYSIS OF THE EXPECTATIONS OF PROSPECTIVE EMPLOYERS

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Ingela Bayramoğlu, FK (Project Leader)
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PROJECT STARTED: 1974

PROJECT COMPLETED: 1976

Presentation of the problem: The project was formerly included in the project "Views of Higher Education", which was financed by the Office of the Chancellor of the Swedish Universities in 1972-73. The aim of this analysis of employers is to acquire further knowledge of the views held by employers about higher education, and of how these views govern the need for and the use made of highly educated employees. The study will take as its starting point the theory of "job competition". Briefly, this theory maintains that in the first instance appointments that compete with each other for "suitable" candidates to fill them. Hence it is not the individuals concerned who apply for "suitable" appointments. The project thus places education and its function in a new perspective.

Scope: A preliminary study of the problem of analysing the views held by the business establishment about the university has been made through the journal of the Federation of Swedish Industries. An empirical study is to be undertaken of the views of people in the business world - mainly personnel managers - concerning higher education. The study will be based on interviews carried out at 25 or so industrial firms.

Bibliographical details (in Swedish): Bayramoğlu I, Hellberg I, Sjöstrand P and Svensson L: An Outline of a Theory of Views. Stencil. Sociology Department, Gothenburg University 1973

TITLE OF PROJECT: THE EXPANSION OF THE EDUCATIONAL SECTOR IN SWEDEN DURING THE 20TH CENTURY

Professor Lennart Jörberg (Scientific Leader)
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PROJECT STARTED: 1974

PROJECT COMPLETED: 1977

Presentation of the problem: The project sets out to give a descriptive presentation of how the educational sector in Sweden has expanded during the 20th century. A further aim is to shed light on the changes in demand, supply and salary rates during the 20th century as regards occupational groups with different educational qualifications and on the interaction between them. In this connection special attention will be paid to graduates.

The analysis is made with the help of the theoretical and hypothetical apparatus developed by international research into the connection between education and economics (the theory of human capital and the filter theory).

The following empirical studies are in progress:

1. A description of the connection over time between economic fluctuations and educational enrolments. It is planned to issue the report in February 1975.

2. Empirical studies of trends in demand and supply as well as of relative salary trends over time.
   a) Pilot studies concerning certain groups, one such study involving the construction of a demand-supply index in respect of teachers. A study will also be made before long of engineers and, possibly, of technicians as well. It is intended to issue a preliminary report in February 1975.
   b) Certain general conclusions concerning the above connections over time.

Methods: Mainly studies of the literature and an analysis of official and other statistics.

TITLE OF PROJECT: TECHNICAL WORK AND THE EDUCATION OF ENGINEERS
- DATA AND THEORIES CONCERING SOCIAL CHANGE

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PROJECT STARTED: 1974

PROJECT COMPLETED: 1975

Aims:

1. To try to discover what kind of data relating to technically qualified personnel is available in existing data registers and studies (this applied above all to graduates in civil engineering).

2. To investigate the extent to which these data can provide a picture of present conditions and possible changes in the social role and status of engineers during the last decades. In this connection special attention will be paid to ascertaining whether existing data can be compiled in a more systematic way in order to throw light on the more important trends thus enabling forecasts to be made.

3. To take note at the same time of theoretical prospects and empirical results from other studies of the role of engineers and technology; this is to be done so that the search for data may be carried out more satisfactorily and so that a deeper insight may be obtained into trends within Sweden.

4. To submit proposals for further studies in this field and also to suggest the kind of statistical and other data that may need to be collected in the future.

Data: An inventory will be made of material from a number of organizations, including Census returns, industrial and educational statistics from the Central Statistical Bureau, registers from the Swedish Employers' Federation and the Federation of Swedish Industry, Swedish Government Official Reports, the Swedish Academy of Engineering Sciences, Colleges of Advanced Technology, the Association of Technologists, etc. In addition: an inventory and analysis of the social science literature in this field.

TITLE OF PROJECT: ALTERNATIVE EDUCATIONAL STRUCTURES IN THE NORTHERN EDUCATIONAL REGION

Docent Nils Häggström (Scientific Leader)
Bertil Hammarberg, PM (Project Leader)
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PROJECT STARTED: 1974

PROJECT COMPLETED: 1977

The purpose behind using the northern educational region as an area of investigation is to provide basic material to enable an overall assessment to be made of the effects in various sectors of society at local, regional and national level of changes in the regional supply of higher education. All existing forms of higher education are to be studied regardless of institutional structure (university education, decentralized university education, courses run by adult education associations, distance university teaching). The intention is to base the analysis on a number of educational structures in the northern educational region.

The project is intended to shed light on the following issues:

1. What effect does an increased regional supply of hihger education have a) on different categories of students, b) on the parent university, c) on "the inclination to take extension courses" on the part of people in employment and their employers? Which target groups are the most accessible owing, for example, to the institutional form of the educational units (a comparison of, for example, adult education organizations and affiliated universities)?What is the effect of having small and large units, of having narrowly-based units or broadly-based ones?

2. The selection process from working life to recurrent education. The distribution of those returning from such courses to the sector of working life in which their increased knowledge and skills are needed or possibly to some sector of working life less in need of such knowledge and skills.

3. The interplay between education and the labour market.

The presentation of the problem that have been selected affect in the first place the long-range planning of hegher education and for this reason research into the presentations selected will also involve some measure of research into future trends. The studies also imply that certain forecasts of future developments.will be made.

TITLE OF PROJECT: EDUCATIONAL ADMINISTRATION IN NORTHERN SWEDEN

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PROJECT STARTED: 1974

PROJECT COMPLETED: 1978

Presentation of the problem: The aim of the project is to shed light on the importance of the departments in higher education. The functions of the departments, basic education and the education of research workers, as well as research work itself, will be dealt with as will also various types of departmental structures. In this way it will be possible to elucidate the connection between structure and funtions. Furthermore, the position of the departments in the decision-making hierarchy will be examined at the local and regional level - for example, the relations with higher authorities as well as to the administrative apparatus. On the basis of empirical investigations an attempt is to be made to analyse possible alternative forms of organization within the departments and between departments at the local and regional level.

Scope: The project is a case-study of Umeå University during the years 1965 to 1975 and of the development of higher education in Northern Sweden.

Methods: The project is a political-scientific stydy designed to determine certain actual conditions and to provide proposals concerning possible alternatives. The study is to be conducted as a theoretical-empirical investigation with the elaboration and application of political-scientific concepts that are suitable in an analysis of organizations of the university department type.

TITLE OF PROJECT: SOCIAL WELFARE THEORY AND SOCIAL WORK - AN INTEGRATED ANALYSIS OF SCIENTIFIC AND POLITICAL MODELS FOR SOCIAL WELFARE POLICY AND THE EDUCATION OF SOCIAL WORKERS

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Lektor Carsen von Otter
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PROJECT STARTED: 1975

PROJECT COMPLETED: 1975

Aim: To study scientific and political models of social welfare policy - especially those parts which are related to the aim of social workers - in order to provide a basis for a description of the aims of the education of social workers, and in so doing investigate the benefits yielded.

A further aim is to provide a basis for assessments of the future demand for social workers and adjacent occupational groups by using more detailed basic material than hitherto. It is also proposed to place the education given at the schools of social studies in this context and give an analytical account of how the relationship between education for social work, the work itself and social change is to be regarded when developing the courses of instruction at these schools.

Method: The project will, on the one hand, provide a survey of sources and literature and analysis that will be value in the current reform work within higher education in general, and within the education of social workers in particular and, on the other hand, constitute a basis for an assessment of requirements and approach should the project be continued, possibly on a larger scale.

Research Projects on

The Organization of Teaching

and Learning

PROJECT TITLE: Applied Learning. Psychology and Proficiency in Studies

PROJ. START: 1970

PROJ. COMPL.: 1975

Docent Ference Marton (Scientific leader)
Lennart Svensson (Research Asst)
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Presentation of the Problem

The project is intended to shed light on three questions. These are set out in the order it is felt they should be posed - in other words the reply given to a question is a contributory prequisite if a reply is to be given to the next question.

1. How can knowledge be observed and described in a profitabel way (by knowledge is meant what is learned)?
2. How can proficiency in studies be observed and described at a functional level?
3. How can proficiency in studies be influenced?

The questions are placed in a specific context, namely in connection with university studies. The group being investigated consists therefore of students. The subjects chosen are characterized by the fact that the learning process involves handling a relatively large amount of verbal material.

Scope

During the first two years of the project two large collections of data took place, the first one relating to 30 students of pedagogy, the second to 30 students of sociology. During the third year two experimental studies were made of attempts to influence proficiency in studies, A number of supplemantary studies have also been made.

Method

Most of the data have been collected through interviews with the persons being studied. The interviews were taped and later typed out. The written versions are each between 50 and 100 pages long and it is these which comprise the bulk of the material for the project. The analysis and interpretation of verbal information is a main problem from the point of view of method. The collections made during the first two years comprise learning experiments in connection with which the persons being studied answer different kinds of questions aimed at testing knowledge and also make retrospective observations about the learning and reporting processes. In the interviews the persons being studied also give an account of their study activity within the range of their normal courses. Results of oral examinations provide supplementary data. The processing of the data is done mainly at the individual level, that is to say it is intended to provide a description of individuals as units and to enable comparisons to be made between individuals as units (comparisons between individuals as regards patterns of characteristics inherent in individuals). The experimental studies were concerned, on the one hand, with the effect instruction (teaching) had on study proficiency and with the design of the learning material and, on the other

hand, with the effect that was attributable to the content of knowledge measurement. In contrast to the studies made during the first two years the experiment was not linked to the normal studies of the students.

Principal Results

As far as the central problems of the project are concerned the results will be published during 1975 in the form of magazine articles, reports and dissertations. If the goal is partly achieved there will be a better basis on which to consider new issues of vital importance to post-secondary education, Issues that are concerned with:

1. Descriptions of goals;
2. What is really being tested in different kinds of knowledge control;
3. The relative distribution of independent studies and teaching;
4. Guidance given to students concerning studies.

Bibliographical details (No. 1, 4, 8, 9, 10 and 11 in Swedish)

The project has so far published ten reports which have been reproduced in one of the report series prepared by the Department of Education. The most important questions are dealt with in the following reports:

(No. 1)
Marton, F
Svensson, L — What do we understand by what is said? (Contribution to Nordic Symposium and Methodological Problems in Educational Research, Hurdal, 26-28 October, 1970) 1970,17 p.

(No. 4)
André, R — The First Term. Activities and Experiences in a Study Environment, 1972,100 p.

(No. 8)
Svensson, L and others — Points of View concerning Research into "The Organization and Working Patterns of Education", 1972,76 pp.

(No. 9)
Hall, S
Pettersson, R — Study Technique for Students? An Analysis of some Manuals as well as an Attempt to survey Experimental Work in Study Technique at Swedish Universities in the years 1965-1971. 1973,56 p.

(No. 10)
Dahlgren, L O
Säljö, R — Study Technique and/or Learning. Some Reflections concerning the Literature on Study Technique. 1973, 34 p.

The following reports will also be available before long. Later two more dissertations will appear, and possibly several articles as well as a book.

(No. 11)
Marton, F — Learning and Proficiency in Studies. Reports from the Institute of Education, Gothenburg University, No. 121, 1974.

(No. 12)
Marton, F — Some effects of Contentneutral Instruction on Nonverbatim Learning in a Natural Setting. Scandinavian Journal for Educational Research, Vo. 18, 191-210 p.

(No. 13)
Marton, F — On Nonverbatim Learning: I. Level of Processing and Level of Outcome. Report from the Institute of Education, University of Gothenburg, No. 39, 1974.

(No. 14)
Marton, F — On Nonverbatim Learning: II. The Erosion of a Task-induced Learning Algorithm. Report from the Institute of Education, University of Gothenburg, No. 40, 1974.

(No. 15)
Marton, F
Dahlgren, L O — On Nonverbatim Learning: III. The Outcome Space of some basic Concepts in Economics. Report from the Institute of Education, University of Gothenburg, No. 41, 1974.

(No. 16)
Marton, F — On Nonverbatim Learning: IV. Some Theoretical and Mathodological Notes. Report from the Institute of Education, University of Gothenburg.

(No. 17)
Svensson L — Study Skills and Learning. Forthcoming Dissertation.

PROJECT TITLE:	University Studies in Work Groups	PROJ. START: 1971
	Docent Ference Marton (Scientific leader) Anders Fransson, FL (Project leader) Airi Rovio-Johansson, FL (Project leader) Institute of Education, University of Gothenburg Mölndalsvägen 36,4 S-412 63 Gothenburg Tel 031- 16 84 23	PROJ. COMPL.: 1975

Presentation of the Problem

The aim of the project has been to develop and analyse a teaching and working pattern where the teacher functions as a supervisor, who "meets" the students at the point they have reached in knowledge, insight and proficiency, and where the students are encouraged to adopt an active and responsible approach to their own studies, Another central aim has been to try to create conditions that bring about active contacts between students and teachers and between students themselves. The project has consisted of two stages. The aim during the first stage was to work aout appropriate working patterns, while the second stage was concerned with an evaluation of such patterns. The starting point for the work was the work group model suggested in the final report by the 1965 Committee on University Pedagogics.

Scope

An experiment in the autumn term 1971 with two work groups each containing 8 students, followed by one involving four work groups each containing 8 students in the autumn term 1972. Control groups with 60 students in all.

Method

The main experiment comprised the practical execution of an experiment with supervised work groups. The experiment covered all the sub-courses contained in the basic A1 course in pedagogy. Two types of control group were studied. Data were collected through a series of questionnaires that were handed out at different times, through informal conversations and observations that were recorded in the supervisors' "diaries", as well as through tests of three kinds: the normal oral examinations, an overlapping test at the end of term and proficiency tests at the start and end of the term.

Principal Result

Comparison with the control groups showed, among other things, that the members of the work groups:

- had reached equivalent results in the ordinary oral examination
- had scored somewhat higher marks in a final overlapping test which aimed at long-term retention
- had improved their proficiency considerably
- had established much better and deeper contact with each other and with the teachers.

The analysis of the experiences gained from the experiment also showed the necessity of concordance between the aim and direction of the studies and those of the examination. When students are actively responsible for their own studies and this manifests itself in a demand for a sense of purpose and relevance, an

examination system which leaves the students at the mercy of an examiner's arbitrariness will counteract this sense of responsibility.

Problems related to the project were discussed at a symposium held on October 30-31, 1974. A report from this symposium is expected early in 1975. In addition Fransson will submit a presentation of the problem, the theories and results to a Council of Europe Symposium on "Strategies for Research and Development in Higher Education" to be held in Gothenburg in September, 1975. The forms the final reports on the project will take are being discussed.

Bibliographical Details (in Swedish)

Fransson, A Rovio-Johansson, A	University Studies in Work Groups. Report of experimental Work with new working Patterns. Part I: Aim, Implementation and some Results. UIA Project No. 1. Reports from Institute of Education, University of Gothenburg, No.95, 1973.
Fransson, A Rovio-Johansson, A	University Studies in Work groups. Report of experimental Work with new Working Patterns. Part II: Supervisors' Diaries, Notes and the Students' Evaluation of the Activities, as well as an Analysis of Guidance Problems in Work groups. UIA Project No. 2. Report from Institute of Education, University of Gothenburg, No. 101, 1973.
Dahlgren, G Ekholm, A Rovio-Johansson, A Säljö, R	Experiences of Teachers and Students who took part in three Experiments involving Group Work and Group Examination at University Level, as well as a short Research Survey of the Effect of the Form of Examination on Learning and Study Methods. UIA Project No. 3. Reports from Institute of Education, University of Gothenburg, No. 115, 1974.

PROJECT TITLE:	Client-Related Supervision	PROJ. START:	1971
	Professor Ingvar Johannesson (Scientific leader) Mona Eriksson, FL (Project leader) Institute of Education, University of Lund, Fack, S- 220 07 Lund 7 Tel 046- 12 46 20.	PROJ. COMPL.:	1975

Presentation of the Problem

Within the project an investigation is made of a form of teaching known as client-related supervision. Interest centres mainly on a situation involving three people, the supervisor, the student and the client. This form of instruction is found for example in the academic training of psychologists, doctors, dentists, physiotherapists and socionomists. The project aims to gather knowledge concerning and experiences of supervision from various disciplines, to compare these experiences and if possible find elements common to all. This work is intended to form a basis for pedagogical directions in supervisory situations with a client present.

Scope

Questionnaires have been sent out to a couple of hundred supervisors and students within different academic courses. An intensive study of one stage in the training of dentists. The development and investigation of a method of learning proficiency while in contact with a client.

Method

Analysis of the literature, questionnaires, interviews, direct observation, micro-councelling.

Principal results

A detailed presentation of the project is to be found in Educational Development, No. 6, 1974. This may be ordered from The Research and Development unit of the Office of the Chancellor fo the Swedish Universities, P O Box 16334, S-103 26 Stockholm 16. The plan is in the first place to give an account of the principal results during the late spring of 1975, in the form of three reports bearing the titles listed below.

Bibliographical Details (in Swedish)

Artin, D	Tooth Extraction: A Descriptive Investigation of a Stage in the Training of Dentists. Institute of Education Report Series, No. 34, Lund 1973, 57 p.
Artin, D	Survey of the Practice Training Situation within the Training of Psychologists. Institute of Education Report Series, No.41, Lund, 1973, 50 p.
Coming Reports:	
Eriksson, M	Client-Related Supervision. A Survey of the Literature and a Structuring of the Problem.
Eriksson, M	Client-Related Supervision. Practice and Desiderata within Higher Education in Sweden.
Eriksson, M	Micro-Councelling. A Way of Learning to interview and listen.

PROJECT TITLE: Treatment of Students with Difficulties in Adjusting to a University Environment

PROJ. START: 1971

PROJ. COMPL.: 1975

Professor Ingmar Durman
Dr Jim Jones
Lars Lindahl, FK
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S- 752 20 Uppsala Tel 081- 14 11 55 or 30 93 69.

Background

Emotional difficulties of many students evidenced by the high number of applications to the student psychiatrist.

Aim

To see if encounter therapy can be one way of alleviating these problems.

Problems

Effectiveness of group encounter therapy. Prediction of outcome from the participants' interpersoanl orientation styles. Follow-up of the participants.

Methods

Pre-post testing, therapist ratings, subjective ratings by the participants, follow-up questionnaires.

According to our preliminary results the alleged negative effects on encounter therapy are non-existant. At follow-up the majority of the participants (50-60%) still feel that the group experience was positive and had changed them in desired ways. Some tentative results concerning the predictability of the outcome of the therapist-client and the client-group interactions. A content-analysis study shows that it is possible to rate the therapeutic conditions of empathy, genuineness and non-possessive warmth reliably.

Bibliographical Details (No. 2, 7-11, in Swedish)

A selection is given below of the reports published hitherto, together with some of the projected reports. Two dissertations are included among the latter.

Lindahl, L — A Few Aspects on a Training Program in Clinical Psychology, 1971.

Berlin, L
Rehnström, L — Group Encounter Therapy - Background and Presentation. 1973

Lindahl, L — The Firo-Theory: Some Empirical Findings. 1973.

Jones, J, et al — Follow-up Study of Intensive Group Experience. 1974

Jones, J
Dureman, I — A Didactic and Experiential Model for Training Group Leaders. 1974.

Lindahl, L — Self-View of Change Following Encounter Group Experience. 1974.

Lindahl, L et al — Encounter Groups: A Theoretical Presentation, as well as an Evaluation Study of Short-Time Encounter Therapy and an Exploratory Group Composition Study. 1974

Coming Reports etc

Lindahl, L	The Effect of Group Therapy on Participants' Interpersonal Structure.
Lindahl, L	Compatability and Group Cohesion and Change in Group Therapy.
Jones-Lindahl	The Relations Between Results on two Self-sealing Questionnaires: FIRO-B and POI.
Jones J	Education and Supervision of Group Therapists.
Jones, J	Bioenergetics and its Applications in Group Therapy

PROJECT TITLE: Studies concerning the Value of Various Teaching Methods in Higher Education

PROJ. START: 1972

PROJ. COMPL.: 1975

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Presentation of the Problem

To shed light on the relative values of various teaching methods.

Scope

The project includes several different subsidiary studies which together affect hundreds of students and their teachers.

Methods

Various methods have been used in the subsidiary studies: direct observation of teaching, questionnaires, tests of knowledge, systematic interviews.

Main Results

A study of research carried out hitherto into teaching indicates that the teaching methods studied have been rather sketchily described, that the possible interactions between aims, individuals and methods are usually not taken into account, that the interplay metween teacher-led instruction and independent study has been neglected, that the question of how new methods are implemented has been overlooked and that most of the studies have been characterized by the fact that they are far removed from the reality in which university teaching actually takes place.

Work within the project is carried out in two principal ways. In the first place an attempt is made on the basis of earlier studies to develop models and theories about teaching. In the second place, an attempt is made to describe and explain the course of events within university teaching by reference to empirical studies.

So far the theoretical side of the work has been reported in a number of project reports (Kallós, 1971 and 1973, and Nelsson, 1973). In the first two reports earlier studies were examined from a number of different starting points, and these two reports have one feature in common, namely, they contain suggestions relating to reorientation and rethinking as fas as studies of patterns and methods of teaching are concerned. In the latter report (Kallós, 1973) an attempt is made to place research into teaching methods in a more fundamental educational context. In this report general guide lines are presented for an examination of educational processes and proposals are put forward regarding the direction future research should take. In this connection an attempt is also made to explain why earlier studies have yielded such contradictory results. In these attempted explanations, and in the efforts made to describe paradigms for research into teaching methods the concept of educational frame occupies a prominent place.

Bibliographical Details (No. 1, 2, 3, 5 and 7 in Swedish)

Up to now the project has published ten subsidiary reports and further reports are expected before the project is wound up.

Kallós, D — Theoretical and Fundamental Considerations relating to Research into Teaching Methods in Higher Education. Report from the Institute of Education. University of Lund, No. 27. June 1971. Stencil. 38 p.

Kallós, D
Paulsen, K
Stenström, K — The University Teacher in the Classroom. Report from the Institute of Education, University of Lund, No. 33. January 1972. Stencil. 34 p.

Kallós, D — Two Enquiries into Teaching Methods. Report from the Institute of Education, University of Lund, No. 35. March 1973. Stencil 55 p.

Kallós, D — On Educational Scientific Research. Report from the Institute of Education, University of Lund, No. 36. April 1973. Stencil 81 p.

Nelsson, O — Teaching and Mathemagenic Activities. A Survey of the Literature. Report from the Institute of Education, University of Lund, No. 37. June 1973. Stencil. 61 p.

Kallós, D
Herslow, M — "Of course it is in fact possible to find out one or two things about the Oral Examination". Presence at, Absence from and Study Independent of University teaching. Report from the Institute of Education, University of Lund, No. 44. August 1974. Stencil. 77 p. plus Appendices.

Björklund, S
Kallós, D
Larsson, L — Hardware gone Soft. Teaching Under Strong Frame Conditions at an Institute of Technology. Report from the Institute of Education, University of Lund, No. 48. September 1974. Mimeo. 61 p.

Kallós, D — Comments on the Importance of Aptitude-Treatment Interaction Research for Pedagogics and for the Theory and Practice of Teaching. A contribution to Schwarzer, R und Steinhagen K (editors): Adaptiver Unterricht. Interaktionen zwischen Lehrmethoden und Lernermerkmalen. To be published by Kösel Verlag, Munich. Report from the Institute of Education, University of Lund, No. 50. October 1974. Mimeo. 13 p.

Kallós, D — Education Phenomena and Educational Research. A contribution to a reader in educational research edited by Bryan Dockrell and David Hamilton. To be published by Hodder & Stoughton, London. Report from the Institute of Education, University of Lund, No.54, December 1974. Mimeo. 31 p.

PROJECT TITLE: The Pedagogics of Problem Solving with an Emphasis on Statistical Problems

PROJ. START: 1973

PROJ. COMPL.: 1976

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Professor Lennart Sjöberg (Scientific Leader)
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Presentation of the Problem

The starting point is the need for knowledge of how students of different university subjects acquire the proficiency that the teaching aims to provide. The general aim of the project is to enquire into the preconditions that must exist if students are to become more proficient in solving problems of the kind that are met with in mathematics and statistics. The project aims to shed light on two questions - and here the assumption is that the first of these questions must be answered before the second one can be attempted.

1. How is the statistical knowledge of students and the method adopted when solving statistical problems related to their proficiency in solving such problems?

2. How can the proficiency of students in solving statistical problems be increased, that is to say, how can they increase their capacity to make active use of their statistical knowledge?

Scope

An analysis of answers given in written examinations in statistics, thinking aloud studies of behaviour when solving statistical problems, attempts to provide individual training in solving statistical problems, attempts to provide group instruction in methods of solving statistical problems.

Method

1. Analysis of errors made in written examinations in statistics.

2. Students are instructed to think aloud when solving statistical problems. The records thus obtained make it possible for the problem-solving process to be followed step by step.

3. Individual students are given practice in solving statistical problems with the help of certain general rules for solving such problems which have been worked out on the basis of previous experiences from the project.

4. The experiences gained from the project are summarized so that one or more groups of students are taught with the help of these rules. The result is evaluated by observing how the students who have been taught in this way differ in problem-solving ability from those who have been taught without the help of the rules.

Main Results

An analysis has been made of answers to 4 tests in statistics from 19 students. All the mistakes are described, and then classified with the help of a coding plan. The most common mistakes proved to be: errors in calculations (26 %),

wrong method (22 %), inserting the wrong values in a formula (13 %), incorrect structure of forms (12 %), and not understanding what the problem implied (9 %). The correlations between the coding categories were low. It was not possible to demonstrate any difference in category distribution between poor solvers and good ones, and the main difference between individuals consisted of the number of errors.

The empirical material for "the thinking aloud experiment" has been collected and the analysis of this stage in the project will be carried out when the print-outs of the tapes are completed. In all, 17 students took part in this experiment. The analysis of the material will, among other things, be directed towards discovering which problem-solving strategies various individuals used. During the autumn of 1975 the project will continue with step 3, as outlined above.

A more detailed presentation of the project is to be found in Educational Development, No. 13, 1973. This is obtainable from the Research and Development unit, P O Box 16334, S-103 26 Stockholm 16.

Bibliographical Details (in Swedish)

So far a report has been presented on the first stage of the project and a further report is expected on the problems of error analysis.

Ankarberg, N
Wikström, T
Problem Solving in Statistics. An Analysis of Incorrect Answers to Examination Questions. Psychology Department, University of Gothenburg, Spring Term 1974. 93 p.

PROJECT TITLE: Psycological Studies of Basic Economic Concepts

PROJ. START: 1974

PROJ. COMPL. 1977

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Presentation of the Problem

The project is a continuation of an earlier project (Applied learning psychology and proficiency in studies).
The background to the project is the idea that both as a process and as regards its outcome learning can be described in terms of the relationship between the sign and what is signified. Quantitive differences are present in the outcome of learning depending on whether the individual's attention is directed towards the sign or towards what is signified. These differences constitute indications of the degree of understanding of what is to be learned and influence the retention of what has already been learned. The present project aims to study the outcome speces for basic economic concepts and also the conditions for steering the activities of the learner so that hos attention is directed mainly towards what is signified. The effects of the steering are analysed in such a way that qualitative differences can be detected.

Scope

Students of economics are used as a study group. About 30 students are the subject of intensive studies, while 100 are the subject of extensive study.

Method

Methodical use was made of solutions used previously, which meant oral interviews with and questioning of those being tested. The precise type of statistical method used is less important than the analysis of the interviewee's replies which enables the outcome spaces of the information to be charted. In other words, it shows the overall variation in the content of replies that appears in a group which has been given a certain task. The outcome spaces mainly consist of a hierarchy of levels with respect to the information content of the interviewee's statements in connection with the "best" reply.

The knowledge content aspect of the experiment consists of 20 selected questions, of which ten are concerned with central concepts in the microeconomics part of the course, while the other ten are concerned with what popular economic questions/concepts. In the first stage of the project these questions are put, both before and after the course, to a small group of students consisting of those who have passed through the upper secondary school and of those who have been admitted under the new regulations. The aim of this analysis is to see how real understanding of the concepts is developed as a result of the process of study.

Main Results

The most important consequences of the project are that attempts are being made to study learning in such a way that the result ought to be of importance for teaching.

PROJECT TITLE: The Role of Mathematics in Higher Technical Education

PROJ. START: 1975

PROJ. COMPL.: 1977

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Presentation of the Problem

The teaching of mathematics in the upper secondary school and in the technical universities is in a state of crisis. It is a matter of great urgency to examine in detail the importance of a knowledge of mathematics as a basis for higher technical education. In this way the goals of the teaching of mathematics could be carted more adequately and the extent to which present goals are met could be studied more exactly.

Method

An analysis is made of the goals of the teaching of mathematics. The goals are divided into subsidiary goals and a study is made to ascertain which of these are important as a basis for higher technical education. This is done, for example, by studying examination papers and text books and also through interviews with and questionnaires completed by professional engineers. The extent to which the goals of present-day mathematics teaching are met is analysed with the help of tests set at the upper secondary school and college of advanced technology levels.

During the spring of 1975 work will concentrate on these three aspects:

a) studies of the literature
b) interviews with technologists
c) questionnaires sent to those representing mathematics in line M of technical universities.

The empirical items are designed to provide a basis for a more precise determination of the requirements as regards knowledge of and proficiency in mathematics within the subject area in question. At a later stage of the project these requirements will be related to the requirements that have to be met in professional life.

PROJECT TITLE: An Analysis of the Teacher Role in Certain Academic Teaching Situations

PROJ. START: 1975

PROJ. COMPL.: 1976

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Presentation of the Problem

The main aim of the study is to carry out an analysis of the role of the academic teacher in certain teaching situations with the present university organization as a frame of reference. The structure of the teacher role is placed in relation to various organizational changes and various teaching and work patterns. The analysis includes an overall view of all aspects of the teacher's professional situation based on a socio-psychological approach.

Methods

Studies of the literature, processing and analyses of empirical material collected in previous studies.

Research Projects on Evaluation:

Function Studies and Result Control

TITLE OF PROJECT: Analysis of Education and Students (Umeå)

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PROJ. START: 1968

PROJ. COMPL.: 1973

Background and aims: The project aimed to provide a firmer basis for the evaluation of courses at Departments of Liberal Arts and Sciences by the systematic analysis of different categories of students. Two different research populations at the University of Umeå were kept under continual observation with regard to their examination results, the amount of time devoted to studying, drop-out from studying and delays in following courses. One group was observed for eight university terms, the other for two.

Project Size: 996 students beginning their first university term at different departments of Liberal Arts and Science at the University of Umeå in the Autumn Term of 1968. 488 students beginning their first university term in the Autumn Term of 1971 at Liberal Arts and Sciences Departments at the University of Umeå when the new Swedish university system had been introduced. (An associated project started in 1971 at the University of Gothenburg in order to find out how far the material from the Umeå project represented the country as a whole.)

Methods: Follow-up of registration statistics, postal questionnaires, analysis of statistics, study of relevant literature.

In the questionnaires emphasis was placed on information about dropping-out, and time devoted to studying. Changes in the students' choice of final examination subjects, and career plans and their attitude to the courses they were attending were also taken into account.

Main results: After 8 terms the situation for students who had begun in 1968 was as follows: 49 % had completed their course, 36 % had broken off studying, and 15 % were still studying at one of the departments. A more detailed analysis of the results showed for instance that the category of students who had completed their course must also include those who had achieved their original intentions even if they did not take a final examination. As 80 % of the students who dropped out of their course definitely did so in order to follow other courses, the drop-out rate can be partly explained by mobility within the educational system. Analysis of the students who transferred to other courses suggests that transfers depend on the students' sex, educational background and educational aims. The length of time spent studying by those who still follow courses at the different departments can be explained by interuptions in studying or the time devoted to studying. Detailed analysis of the beginners from 1968 and the whole group studied in 1971 shows that a system of criteria which takes into account the number of points obtained by students in relation to the amount of time spent on studying gives a student success rate which is within the critical boundaries laid down by the Swedish parliament. It is necessary to divide up the groups of students into sub-groups on the basis of educational background, motivation, and educational aims, in order to be able to trace causative factors which can be dealt with by pedagogical measures. The evaluation of the success in courses at Departments of Liberal Arts and Sciences cannot be carried out in isolation from other areas of higher education. The interrelationships and interdependence that exist must be paid more attention.

Bibliography (in Swedish):

Elgqvist-Saltzman, I — Analys of studieresultat i relation till bakgrundsdata studiedecidering och studieaktivitet på några studentgrupper i Umeå. (An analysis of the success in their studies of some groups of students at Umeå in relationship to background information, study decisions, and time spent studying.) In Handal: "Universitetets studier under debatt", Oslo 1970.

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Elgqvist-Saltzman, I
Stage, C — Studieframgång vid Umeå Universitet. (Success in studies at the University of Umeå.) SOU 1970:20 (1970)

Elgqvist-Saltzman, I — Studieavbrott vid filosofiska fakultet i Umeå. (Drop-out at the Departments of Liberal Arts and Sciences at the University of Umeå.) Pedagogiska monografier, Universitet och Lärarhögskolan i Umeå, nr 10, 1972.

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Lindberg, M-B — Sex studieterminer vid filosofisk fakultet. (Six university terms at the Departments of Liberal Arts and Sciences.) Pedagogiska rapporter, Universitet och Lärarhögskolan i Umeå, nr 28, 1972.

Elgqvist-Saltzman, I — Avbrott och genomströmning. En uppföljning av studerande vid filosofisk fakultet i Umeå. (Drop-out and success. Following-up students at the Departments of Liberal Arts and Sciences at the University of Umeå.) Pedagogiska rapporter, Umeå, nr 37, 1973.

Elgqvist-Saltzman, I — Är avbrott och genomströmning meningsfulla effektivitetsmått för universitetsutbildning? (Does study of the drop-out rate and the success rate of students provide a valid measure of the efficiency of university education? Pedagogisk debatt, Umeå, nr 10, 1973.

Elgqvist-Saltzman, I — Studieintensitet och studieprestation för recentior -71 vid filosofisk fakultet i Umeå. (Time devoted to study and results for freshmen students in 1971 at the Departments of Liberal Arts and Sciences at the University of Umeå.) Pedagogiska rapporter, Umeå, nr 39, 1973.

TITLE OF PROJECT: The Post-secondary Process of Study and Vocational Choice

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PROJ. START: 1970

PROJ. COMPL.: 1979

The aim of the project is to find out more about the role of further education in a person's development, with special attention paid to the importance of factors in society and within the individual on a) the individual's choice of higher education, b) the effects of such further education on his personal development.

In order to examine these questions a description was prepared for a total group (i.e. a group consisting both of individuals who had chosen a course of higher education and of individuals who did not go on to such a course direct from secondary school.) This description included:

- the actual choice of course of study or career
- current plans for further education
- obstacles to further study
- experience of further education
- expectations from work or from post-secondary education
- successive changes in the aspects listed

These descriptions were placed in relationship to the individual's background, personality and adjustment to school life earlier. They will also form the basis of a study of how the choice or adjustment to a course of further education or a career is affected by

- the individual's life values
- knowledge about education or about work
- expectations from education or from work
- personality factors such as intelligence, creativity or timidity
- economic factors.

After a course of post-secondary education has been completed the congruence of expectations and experience will be studied with special attention paid to

- education
- work
- economic situation
- status
- social confidence.

Scope

400 students in their third and final year at secondary school in the school year 1970/71 have been studied as a pilot group. Some of these students have been observed since they were 13. The main group consists of about 1 000 pupils in the basic schools in Örebro who were born in 1955. This group has been observed sinde the age of 10.

Method

The aims of this project demand a longitudinal approach and it is valuable to be able to follow the development of an individual from the first year at school.

This is possible in this project as there is a great deal of information about individuals from the age of 10. It is also important that the description is a broad one so that it contains sociological, psychological, and biological factors for instance. Information of this breadth and depth over a long period is obtainable as the information from the Örebro project which covered the pupils' years at the basic school and at secondary school can be used. This information includes personality factors, family background, adjustment, choice of studies or of career, and information gained from questionnaires about the children's environment, spare-time, experience of secondary school, etc.

For the project in progress information was collected when the pupils left secondary school, in which they were given an opportunity to express their attitude to post-secondary education or to the choice of a career, their expectations from the future, and their attitude to the basic and the secondary schools. In the spring term of 1973 an enquiry was made through questionnaires whithin the pilot group with reference to their work situation or their position within further education two years after the secondary school. It is intended to observe both groups for the rest of the project. The groups that have not begun post-secondary education will also be followed up with regard to their plans to take up further education, their attitude to it and so on.

When a course of further education has been completed it is intended to carry out an intensive analysis based on information collected from questionnaires and interviews so that a study in depth can be made of the role of higher education in the development of the individual, and therefore the degree of agreement between the individual's expectations and what actually happened in certain central questions.

Results and Bibliography

Elg (1972 a, b) has written a report presenting the results which describe the older group of pupils leaving the third and final class in the secondary school. In it can be found information about the individual's choice of career or study (both in real terms and if there were no restrictions). The relationship between this choice and some other factors such as intelligence and creativity have also been studied (Hirsch, 1974). Bergman, Berggren, Dunér, and Magnusson (1973) have reported the results of a questionnaire on choice of post-secondary education or career for the older of the two groups. These results have also been combined with information obtained earlier to illustrate aspects of development. There are also results which show for instance (a) the present situation of hte groups studied, (b) their future plans, (c) previous post-secondary studies, and (d) how they experienced the secondary school.

Bergman, L R, Berggren, M, Dunér, A and Magnusson, D: Ungdomars post-gymnasiala studie- och yrkesval. (Young people's choice of study or career after the secondary school.) Öreproprojektet, Interim study, no 19, 1973.

Dunér, A: Vad skall det bliva? Undersökningar om studie- och yrkesvalsprocessen. (What's it going to be? Research into the process of choosing a course of further study or a career.) Stockholm: Allmänna förlaget, 1972.

Elg, L: Kreativitet och högre studier I (Creativity and further Education I). Örebroprojektet, preliminar Study, no. 16, 1972 (a).

Elg, L: Kreativitet och högre studier II: Örebroprojektet, Preliminary study no. 17, 1972 (b).

Hirsch, C J: Kreativitetens roll vid val av utbildning och yrke. (The role of Creativity in the Choice of Education or a Career.) Örebroprojektet, 1974. A stencilled report.

TITLE OF PROJECT: Study of Internal and External Communication concerning Higher Education.

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Kenneth Abrahamsson Fil Kand (B.A.) (Project leader)
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PROJ. START: 1970

PROJ. COMPL. 1974

Background and aims: The project started from ideas about a two-way contact between the authorities (educational organizations) and the public (potential adult students at the university level). APPLICATION: To problems of information and communication which result from opening higher education to a wider group of people. AIM: To study the prerequisites for and conditions of two-way contact between educational organizations and potential adult students. PROBLEM: How can information reach and contact be made with future adult students? How effective are the different media such as brochures or advertisements for instance in reaching different groups of people? How do evening classes about the choice of a course of study or a career function as one means of contact? How is information about education spread within industry and commerce and how are opinions about education formed? More generally the project attempts to show the functions and effects of different forms of contact on participation in courses for adults at the university level and on the individual's opinion of the importance of different choice factors.

Method

The study of relevant literature, questionnaires, interview and observation, conferences to establish contacts.

Main results

These have not yet been presented comprehensively but a final survey of the project will be presented at the beginning of 1975. Information and contact exists on the basis of public availability and a potential student must physically or psychologically seek it out for himself. Opportunities for establishing two-way contact on a broad front are, therefore, limited, as the inclination to express desire for education like the interest in information about education is shaped by the individual's social situation and has a certain relationship to what are known as the resource variables such as education, career, invulvement in other social activities, etc.

Bibliography: During the project twenty or so reports with varied contents and scope have been produced. The most important are:

Abrahamsson, K Studier av intern och extern kommunikation rörande högre utbildning. (Study of Internal and External Communication concerning Higher Education). Situation report 70/71.

Ohlsson, L B Information om högre utbildning - en studie av spridningsmönstret för tre UKÄ-broschyrer. (Information about Higher Education - A Study of the Distribution Pattern for three Brochures published by the Office of the Chancellor of the Swedish Universities.)

Abrahamsson, K EKO-projektet - vilsekommen luftballong eller framgångsrik forskning? (The EKO-Project. A Wandering Hot-Air Balloon or a Successful Research Project?) Situation report, 71/72.

Abrahamsson, K Försök med studie- och yrkesorientering i grupp för vuxenstuderande. (Experiments in giving Information about Career and Study Possibilities to Groups of Adult students).

Abrahamsson, K Kom igen Svensson! Om vuxenutbildningens kommunikationsproblem. (What did you say, Mr Smith! Problems of communication in Adult Education). Studentlitteratur AB, Lund.

In addition a number of reports are expected at the beginning of 1975. They have the following preliminary titles. A doctoral thesis in which experience from the EKO-project and experience from other forms of contact such as information courses for adult students will be dealt with together is also planned:

Abrahamsson, K Edfeldt, Å W 1975	Studier av intern och extern kommunikation rörande högre utbildning - slutrapport för EKO-projektet. (Study of Internal and External Communication about Higher Education - A Final Report from the EKO-Project).
Abrahamsson, K 1974	Personalutbildningsdagar - ett försök med diskussionsgrupper om arbetskrav och utbildningsbehov samt utbildningsinformation för fyra yrkesgrupper. (Personnel Education Days - A Experiment with Discussion Groups about Demands made at Work and Need for Education and Information about Education with Four Categories of Worker.
Abrahamsson, K	Information - och vägledningsbehov hos presumtiva vuxenstuderande på universitetsnivå. (Information - the Need for Educational Guidance of Potential Adult Students at University Level).
Abrahamsson, K	Luftballongen tar mark - en redovisning av EKO-projektets verksamhet 1970-1974. (The Hot Air Balloon comes down to Earth - on Account of the EKO-Project's Activities from 1970-1974).

PROJ. TITLE: The University Environment, Efficiency in Studies and Political Activity.

PROJ. START: 1970

PROJ. COMPL.: 1975

Professor Georg Karlsson (Scientific leader)
Göran Cigéhn Research Assistant (Project leader)
Johnny Karlsson, Research Assistant (Project leader)
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Background and aims.

The aim of the enquiry is to show how the students' environment and especially, their university environment affects and channels their attitudes and activity, especially when it comes to study and politics. The general aims of the enquiry include:

1) to describe the social and economic situation of the students and how this alters during their first year of study.

2) to attempt to explain students' attitudes and activity (actions) with regard to a) their social and economic situation, b) the university environment and changes in this, c) the state of affairs in society as a whole and changes that take place within society.

Scope

A complete study of all freshmen in the autumn term of 1970.

Method

A panel study: questionnaires were distributed on three occasions.

Main results

Students from social group 3 (mostly working-class students) were more stable in their choice of subjects than students from other social groups. The same was true of men when they were compared with women. The stability of choice of subject was also affected by the students' degree of certainty that the subjects chosen would lead to a satisfactory job.

As many as 62 % of the panel changed their political opinions in the first two years at university. Students from social group 3 changed their political opinions least often. The same was true of men. Experience before studying was of more importance than experience while studying in affecting political opinions. The social group which a person belonged to and his degree of confidence in the political party he liked best when registered at the university in the autumn of 1970 are two central variables in explaining the variation of stability in supporting political parties.

One interesting fact was that the proportion of the panel who could support no party at all increased. The number supporting the non-socialist opposition parties and the ruling Social Democrat party declined, while the number supporting other left-wing parties increased.

After two years at university a majority of the students had still not made any definite decision about their future careers. They were on the whole very pessimistic about their chances, both of finding work at all and of finding work as qualified as they had originally expected. The risk of unemployment was judged by many of them to be large or very large. Nearly half of them preferred the idea of working for the government of local government to any other employer.

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Cigéhn, G — Umeåstudent 1970. Några data om de nyinskrivna studenterna vid Umeå universitet och högskolor hösttermin 1970. (Umeå Students 1970. Some information about Freshman at Umeå University and University Colleges in the autumn term, 1970). Research Reports from the Department of Sociology, University of Umeå, No. 7, November 1970.

Karlsson, G — Umeåstudent 1970 - Några metodologiska synpunkter. (Umeå Students 1970 - Aspects of Methodology.) Research Reports from the Department of Sociology, University of Umeå, No. 18, June 1974.

Preliminary versions of the following reports are available:

Cigéhn, G
Karlsson, J — Miljörapport. (Report on the Environment.) Department of Sociology, Umeå University.

Cigéhn, G
Karlsson, J — Universitetsstudier och politik. (University Studies and Politics.) PM No. 1, Department of Sociology, Umeå University.

The following reports are expected in the autumn 1975:

Cigéhn, G — Stabilitet och instabilitet vid val av utbildning hos en grupp studenter. (The Stability an Instability of Choice of Subjects in a Group of Students.) Department of Sociology, Umeå University. (September 1975)

Cigéhn, G — Stabilitet och instabilitet i partipolitiska sympatier. (Stability and Instability in Supporting Political Parties.) Research Report from the Department of Sociology, University of Umeå, No 26, November 1975

Cigéhn, G — Social bakgrund, studier och politik - några paneldata från Umeå. (Social Background, Studies and Politics - some Paneldata). Research Report from the Department of Sociology, University of Umeå, No 25, October 1975

The following reports are to be published during 1975-76:

Cigéhn, G — Social bakgrund och förändringar under studietiden. (Social Background and Changes during the Period of Study). Preliminary title. Department of Sociology, University of Umeå.

Karlsson, J — Framtidsförväntningar och yrkesplaner hos en grupp studenter under deras första år vid universitet och högskola. (Future expectations and Career Plans of a Group of Students in their first Year of Post-secondary Education.) Department of Sociology, Umeå University.

Karlsson, J — Miljöfaktorer och förändringar i partipolitiska sympatier hos en grupp studenter. (Environmental Factors and Changes in Support for Politicla Parties in a Group of Students.) Department of Sociology, Umeå University.

PROJECT TITLE: Analysis of Education and Students (Gothenburg).

Professor Urban Dahllöf (Scientific leader)
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PROJ. START: 1972

PROJ. COMPL.: 1974

Background

The UEA project conducted at the University of Umeå under the direction of Professor Sten Henrysson and Dr Inga Elgqvist-Saltzman showed as one of its results that the drop-out rate and the amount of failure among students was much lower than the official statistics suggest. (Elgqvist-Saltzman 1972). Is this tendency also true of a university in a large city like Gothenburg? In order to find out a parallel enquiry was started in Gothenburg. Its aim can be described briefly:

1) To follow up the new system of study introduced in the departments of Liberal Arts and Sciences (the system known in Sweden as PUKAS) and provide as accurate and reliable information as possible as a complement to the official statistics.

2) To determine the factors that slow down students in their studies or lead to students dropping-out.

3) To describe students' motivation, degree of conscientiousness and certain attitudes to their course.

Scope

The group studied consisted of 1 415 students registered for the first time at the English, Business Economics, History, Chemistry, Mathematics, Education and Statistics Departments.

Method

Postal questionnaires of paneltype with two measurements. The statistics obtained have been used mainly for descriptive purposes.

Results

One of the theoretical starting-points was that it is not very fruitful to look at the liberal arts faculty (university) as a closed system when one tries to evaluate its "productivity". The results clearly show that this view is correct. Many of the "drop-outs" which from a "closed-systemsview" should have been classified as "not succesful" is instead succesful since the majority of the "drop-outs" have transferred to other types of education such as medical, technical or odontological studies. When this kinds of "drop-outs" are excluded from the material from which the studystatistics are calculated and when other variables as fulltime studies, precense in classroom etc are controlled the educational "efficiency" of the liberal arts faculty is considerably higher than it appears from the official statistics.

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Några preliminära resultat från UEA-prpjektet. (Some preliminary results form the UFA project). Department of Education, Gothenburg University, 1972. (On stencil only)

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Två intensivundersökningar om bortfall och genomströmning. Några preliminära resultat och en jämförelse med data från den officiella statistiken om 1969 års studentordning. (Two Intensive Surveys on the drop-out rate and students' success in their studies. Some preliminary results and a comparison with the official statistics about the new system of study introduced in 1969.) In UKÄ-Aktuellt, no 12, 1972/73.

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Studieavbrott och studieresultat vid filosofisk fakultet. En intensivstudie av förstagångsregistrerade i sju ämnen vid Göteborgs universitet, läsåret 1971/72. (Dropping-out and Results Obtained in the Departments of Liberal Arts and Sciences. An Intensive Study of Freshman registred at 7 Departments in the University of Gothenburg for the Academic Year 1971/72.) Department of Education, Gothenburg University, 1973. (On stencil only).

Patriksson, G
Studieavbrott på högskolenivå. Utkast till några teoretiska förklaringsmodeller. (Drop-out at the University Level. Suggestions to some Theoretical Models of Explanation). Department of Education, Gothenburg University. (On stencel only).

PROJECT TITLE:	A Survey of Vocationally-oriented Courses	PROJ. START:	1972
	Lars G Bäckström (Scientific leader) Odd Pedersen (Project leader) Department of Education, Linköping University, Fack, S-581 83 Linköping Tel 013- 13 03 90	PROJ. COMPL.:	1975

Background and Original Aim

The main aim is to make a descriptive study of previous students on vocationally oriented courses at university level, in Swedish YRK-kurser, (mainly including students from autumn term 1971 and spring term 1972) regarding various background variables and to examine questions concerning design and effect of the courses.

Scope

The descriptive study will be made of about 3 043 students. Questionnaires will be sent to 1 624 students.

Method

Questionnaires.

Main Results

No results have yet been presented but a final report from the project is expected in the summer of 1975. The report will pay special attention to "typical" groups of students such as adult students at the university level. The results ought to provide a useful basis for the planning of YRK-courses in the future and for deciding their aims, contents and methods.

PROJECT TITLE: Post-Secondary Education and Background

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PROJECT START: 1972
PROJECT COMPL.: 1975

Background and Aims

The project involves following-up the students in the final year at Swedish secondary school (gymnasium) who took part in 1970 and 1971 in the IEA-project (International Evaluation of Educational Achievements). The primary aim of the project is to examine recruitment to the universities and university colleges. The importance of students' achievement at secondary school, their educational aims, their social background, etc, in their choice of further education is also being studied.

Scope

The group of students studied consists of 1) 2 300 students who were in their third and final year at secondary school in 1970 and 2) 2 800 students in their last year at secondary school in 1971. The population has been chosen to represent the country as a whole.

Method

Information about the students' choice of further education and about their educational progress has been taken from the statistics on further education kept on register at the Swedish Central Bureau of Statistics. This information is related to the background information and the statistics on the students' knowledge and attitudes available in the IEA-project.

At present discussion is taking place about what type of analysis of the material collected ought to be carried out. The necessity of carrying out an intensive study of the 100 or so students in the survey group who are at present studying at the Royal Institute of Technology in Stockholm is also being discussed. There are preliminary plans for several different reports. The first would be a description of the influence of geographical factors and subjects chosen at school on the choice of further studies, the second would be an examination of a multivariable model, and the third would pay special attention to the students' attitude to courses in the Natural Sciences or Technical courses.

Main results

At present none of the results have been analysed finally. A more detailed presentation of the project can be found in Educational Developmen , 1973:11. This can be obtained from The Office of the Chancellor of the Swedish Universities, Research and Development unit, P O Box 16334, S-10326 Stockholm 16.

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Mählck, L Från Gymnasium till högre utbildning. Några analyser av olika bakgrundsfaktorers samband med valet att gå vidare till universitet och högskolor. (From the Secondary School to Higher Education. Some Analyses of the Relation of Background Factors to the Decision to go on to University or University Colleges.) Report No. 4 from the Department of International Education, Stockholm University, Stockholm. March 1974. 80 pages.

PROJECT TITLE: Evaluation of University Teaching at the Department Level.

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Martin Johansson (Project leader)
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PROJECT START: 1972

PROJECT COMPL.: 1975

Background and Aims

The need for the evaluation of university teaching has been accentuated. This is caused partly by the increasing heterogeneity of the student population and by the continual changes which are being made in various courses.

The aim of the project is to use an evaluation model comprising educational objectives - background variables - the teaching process - results to specify and measure relevant variables. It is also intended to test the evaluation models worked out on sub-courses in three different subjects.

Scope

The evaluation of sub-courses in three different university subjects. The use of tests of previous knowledge and teachers' and students' judgement of the demands on previous knowledge in different subjects. Analysis of the factors that affect atmosphere and success in studying by means of the critical incident technique through interviews with 368 students.

Method

Questionnaires, interviews, observations, tests, time rating schedules.

Results

The results from the study of the role of previous knowledge have been presented in two reports. A comprehensive presentation of the results of the project is expected in 1975 in the form of a combined doctoral thesis with the following preliminary headings:

1) I General Background and Aims. II Survey of Relevant Literature. III Evaluation of Systematized, Decentralized University Education. IV Evaluation of Sub-courses in three University Subjects. V Previous Knowledge and Aspects of the Methodology of Testing Previous Knowledge. VI Factors that Affect Atmosphere and Success in Studying. VII Conclusions.

A more detailed presentation of the project can be found in Educational Development, 1974:1. This is available in English and can be obtained from the Office of the Chancellor of the Swedish Universities, Research and Development unit, P O Box 16334, S-10326 Stockholm 16.

Bibliography:

Franke-Wikberg, S Användning av förkunskapsprov inom filosofiska fakultet. (The Use of Tests of Previous Knowledge in the Faculties of Science and Arts.) Educational Reports, University of Umeå, No 43, 1974.

Franke-Wikberg, S Bedömning av förkunskaper samt granskning av förkunskapsprov i några universitetsämnen. (Judgement of Previous Knowledge and Scrutiny of Tests of Previous Knowledge in some University Subjects.) Educational Reports, University of Umeå, No 44, 1974.

PROJECT TITLE:	A Study of Administrative Functions at University Departments	PROJ. START:	1973
	Ander Herbert Institute of Applied Psychology University of Stockholm, Råsundavägen 101, S 17137 Solna Tel 08- 27 26 10	PROJ. COMPL.	1975

Background and Aims

On initiative of the Union of Swedish University Professors, The Office of the Chancellor of the Swedish Universities has decided to survey and analyse administrative functions in Departments in Universities and University colleges in the faculties of Arts and Sciences, Technology and Medicine. The survey is chiefly concerned with the work-load of heads of departments. It is to establish what duties heads of departments have, how much working time is devoted to these duties, problems and difficulties which are experienced in connection with them, and the organizational and financial circumstances which can be shown to relate to these problems and difficulties.

Method : 1. In a small number of case-studies of departments, information is collected by interviewing the head of department an from a diary which the head of department keeps. Some other members of the administrative staff are also interviewed.

Case studies have been carried out in five "typical departments".

2. A questionnaire has been sent to all the departments in the relevant faculties in Sweden. Because of variations in the number of responses, the faculties of Arts and Sciences will be dealt with mainly.

A final report will be ready in September 1975.

PROJECT TITLE:	Ways in, out of, and through an Educational System	PROJ. START 1973
	Inga Elgqvist-Saltzman Department of Education, University of Umeå S-901 87 Umeå Tel 090- 12 56 00	PROJ. COMPL. 1975

Background and Aims

The information and statistics already collected for the two populations used in the project The Analysis of Education and Students serve as a starting point for a discussion of external evaluation of educational courses comprising the interplay between course followed and the students' subsequent career and in connection with this aspects of the content of the educational courses. Student choice and mobility within the educational system will be interpreted in the light of theoretical assumptions about choice of career.

The exact working method is still subject to discussion. One proposal is carry ot a series of intensive intreviews with a limited number of students in order to establish the importance of education on occupational roles. One problem is the time factor. How long after an educational course has been completed or abandoned should the students be interviewed if, at the same time, information is required which will be of use in the planning of educational courses?

Scope

Approximately 1 000 students studying in the faculty of Arts and Sciences at the University of Umeå.

Method

Study of relevant literature, interviews, questionnaires.

PROJECT TITLE: The results of Post-graduate Education.

PROJ. START: 1974

PROJ. COMPL.: 1978

Professor Birgitta Odén
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Background and Aims

The content and efficiency of the training of scholars will be surveyed historiographically. The costs for training scholars will be investigated and related to the number of scholars graduating from courses - this within a frame of reference taken from business economics. By studying the content of these courses at different universities there will be possibilities of studying the different factors which affect changes (growth and diminution) in the quality and quantity of research (availability of staff, hours per course, financial resources, etc).

Method 1) Information on record will be examined historiographically;

2) The methodology of the social sciences will be applied to official statistics.

Birgitta Odén has finished an essay on the concept of the paradigm as a means of analysing historical research and the formation of different schools of thought. The collection of information from 1890 onwards about history, political science and geography has begun. A survey has also begun of the literature on quantitative methods in the sociology of science (a report by Birgitta Pikwer is expected in February 1976). A similar survey of the literature on the production of knowledge and the communication of knowledge is written by Jan Thelander.

Bibliography

Odén, Birgitta Historia som forskningsprocess (History as a Research Process). Scandia, 1973 (pages 151-158)

Odén, Birgitta Det moderna historisk-kritiska genombrottet i svensk forskning (The Breakthrough of Modern Historical Criticism). Scandia 1975:1 (pages 5-29).

Odén, Birgitta Lauritz Weibull och forskarsamhället (Lauritz Weibull and the Research Community). Biblioteca Historica Lundensis, 1975

Thelander, Jan Forskarutbildningen som traditionsförmedling - problem och teori i traditionsanalys och i historiografisk forskning

PROJECT TITLE: Production and Productivity at Swedish Universities.

PROJ. START: 1974

PROJ. COMPL.: 1975

Professor Ingemar Ståhl (Scientific leader)
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Background and Aims

The aim of the investigation is to estimate a simple function of production which can be used for Swedish universities. By production is meant first-degree courses, courses for research workers, pure research, applied research and other functions which the universities can be asked to perform. Furthermore substitution possibilites in the use of the different production factors at the disposal of the universities will be examined more closely. Interest will be devoted mainly to an analysis of how far the marginal conditions for efficient production are fulfilled. In this connection it is natural to wonder whether the formal framework within which the universities are obliged to act facilitates rational planning of production or makes it more difficult.

Scope

The investigation is a preliminary investigation and will be carried out at a limited number of departments.

Method

The method of this analysis is based on traditional economic theory and is intended to adapt the information to a function of production. To obtain information, a complete survey is planned of certain chosen subjects and possibly also of certain groups of subjects prescribed for certain first-degree courses.

Main Results

The main importance of the investigations for the future planning of educational courses will most probably be that it can give information about production conditions and an assessment of the elasticity of substitution of production factors. This will be of great importance for the planning and aims and organization of widened university education. The investigation should give answers to such questions as whether recurrent education in the future should be arranged in only a few places with the students physically present there, or if classroom time can be replaced by time spent on study at home, etc. Similar research has been carried out outside Sweden and there is a certain amount of literature on the subject. In Sweden no estimate of the function of production at universities has been made. The project will be in contact with other educational research projects so that results can be collated in planning future educational policies. There will also be contact with the group in the Swedish Central Bureau of Statistics which is reviewing the production of statistics on education.

PROJECT TITLE: The Career Paths and Spheres of Work of the Political Scientist.

PROJ. START: 1974

PROJ. COMPL.: 1975

Professor Olof Ruin (Scientific leader)
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Background and Aims

People with an university degree in political science have often found work as teachers, in the civil service, or in the mass media. Changes which have taken place in the labour market in recent years have also changed conditions for political scientists. Political scientists nowadays have to go outside these traditional areas to a greater extent if they are to find work.

The aim is to attempt to make a detailed analysis of the labour market for political scientists.

In which sectors of the labour market are political scientists active? What are the non-traditional fields of employment in which political scientists are active? What are political scientists asked to do in their work?

Scope

The investigation has dealt with 232 people; the frequency of response has been 77,1 % (179).

Method

Postal questionnaires.

A final report (in Swedish) is expected in March 1975.